HEALTH

EDITED BY

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Notes by the Way

"Health is the foundation of all our physical happiness."—*Herder.*

THE Fisheries Exhibition in London is to be followed up next year by a great International Exhibition of objects, &c., connected with the Preservation of Health and the Prevention of Disease. This is a highly gratifying piece of intelligence. It shows that health and physical well-being as topics of interest are really of national importance. Under the guiding care of an efficient administration, there can be no question of the success of the great exhibition of 1884; and there can be little doubt that this scheme will assume a thoroughly educative tone, and embrace full instruction in the various arts and sciences which assist us in avoiding the health-dangers that everywhere beset us. If the success of the Fisheries Exhibition was so marked, there should be no lack of public interest and support for an exhibition dealing with problems and subjects of far more vital importance than the increase of the food-supplies we draw from the briny deep. We shall present the readers of HEALTH, in due course, with full particulars of this interesting exhibition.

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THE "National Health Society" of London intend to hold a three days' conference in the Parkes Museum, Margaret-street, W., on "School Life and Hygiene." The conference is to be held early in December, and the supreme importance of the subject should secure a large attendance of the public. Within the area of the schoolroom, as has frequently been pointed out in our pages, there is a wide field for the cultivation of health science. The time is fast approaching when the care of the child's constitution will form a topic in which both parents and teachers are bound to take a high interest. The conference to which we have alluded will materially assist the formation of definite opinions regarding the regulation of childhood in relation to the school.

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EDINBURGH is to have continued this year the admirable courses of "Health" lectures which were organised for the instruction of the citizens in the laws of rational living. The syllabus for the present session is a most interesting one. The lectures are to be given in the Free Assembly Hall, on Saturday evenings, at eight o'clock, from Nov. 17 to Jan. 19 inclusive—a break being allowed between Dec. 15 and Jan. 5 for the Christmas and New Year holidays. Drs. Chiene, Smart, Cathcart, Macadam, Turner, and Clouston are to discourse on health-topics, lying each within the province of the respective lecturers; while Mr. Hely Almond, of Loretto School, is to deliver a lecture in the series on that attractive topic—"The Difficulties of Health-reformers." We trust that a programme so attractive as that presented to the Edinburgh public will secure large audiences. The professional reputation of the lecturers should alone draw crowds eager for instruction in sanitary science.

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THAT indefatigable health-lecturer, Dr. J. J. Pope, is doing good work in the diffusion of a knowledge of health-laws. We strongly counsel our readers not to miss the opportunity of hearing Dr. Pope's genial and racy lectures wherever such opportunity presents itself. The list of Dr. Pope's engagements includes Burslem, Dumfries, Dumbarton, Lenzie, Morpeth, Kelso, Galashiels, North Berwick, Bonnyrigg, and Whitehaven.

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IN referenee to a note dealing with remedies for loss of voice in speakers and singers, printed in HEALTH, No. 27 (page 23), we think it right to remark that the paragraph in question was taken from the *Practitioner*, of August, 1882, and is there noted as having in turn been copied from the *Revue Médicale*. The amount of nitrate of potass there prescribed (2 drachms), it has been pointed out to us, while not absolutely dangerous to an adult as a dose, is to be regarded as excessive. A much greater quantity of this substance can be prescribed, provided the period during which it is to be taken is extended over say twenty-four hours. The ordinary doses of nitrate of potass are from 10 to 20 grains and upwards, but doses ranging from several drachms to an ounce or more, may, as already stated, be given, largely diluted in barley-water or other beverage, as a drink, or as "nitre whey." For the "two drachms" of the note quoted from the *Practitioner*, should be substituted 20 or 30 grains. It is probable that in the *Practitioner* paragraph, copied from the *Revue Médicale* (of April 12, 1882) two grammes (about 30 grains) of French pharmacy have been misread for "two drachms."

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THE question of home-lessons and educational overwork is exciting professional attention amongst the teachers. The Doncaster and District Teachers' Association has decided in favour of the discontinuance of home lessons. This is a step in the right direction. True teaching should be independent of such home lessons as are at present in vogue, and in the preparation of which the memory is often irretrievably spoiled and the faculties of mind stunted in the attempt to load the brain with details it has no power to analyse or comprehend. The Leeds School Board has also issued a circular to medical men and others inviting information on the subject of overstrain in education. This is what might have been expected from one of the most enterprising and enlightened of School Boards in Great Britain.

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LING'S system of Swedish gymnastics is coming to the front as an educational feature, under the auspices of the London School Board. The girls already practise the first stage of Ling's exercises, requiring no apparatus. A complete set of the apparatus necessary for the teaching of the

second stage is to be erected in a central position in London, and a Swedish instructor will give lessons for six months to the teachers in the use of the apparatus. Physical education is "looking up" in the south, at all events.

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An inquest was held last week, in London, on the body of a girl aged 17, who became ill after partaking of some "potted salmon" purchased from a grocer in Pimlico. Death was declared to be due to inflammation, the result of eating poisoned salmon. The tin in which the salmon had been contained was denuded of its tin in several places. Nitrate of tin had been formed, and decomposition of the salmon was the result. The medical recommendations that such foods should be packed in glass, and that they should not be eaten after the tin had been allowed to stand open for a time, are worth bearing in mind.

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Mr. Arthur Pease, M.P., speaking at Middlesbrough, on intemperance amongst women, lays the blame largely at the door of "grocers' licenses." Whether that vexed question is thus rightly stated or not is foreign to a more important point raised by Mr. Pease. This was, whether or not the intemperance of women was due to the lack of healthy physical exercise. We are of opinion that Mr. Pease struck the right nail on the head in making this suggestion. The life of the working woman is by no means an enviable one. It knows very little brightness or pleasure, and the temptation to intemperance is ever strongest where there is an absence of fresh air, rational amusement, and healthy recreation. The question, in all its phases, is a difficult one; but it is one, nevertheless, which cries loudly for a meed of the attention now being lavished upon the social state of the masses.

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The end of the year brings "the orange-peel season" once again to our doors. A week or so ago, an inquest was held on the body of a gentleman who slipped on a piece of orange-peel, and fell, fracturing his leg. He died in the hospital to which he was carried. A little thought on the part of the public should suffice to avert the often serious effects which follow the baneful practice to which we allude. Parents, teachers, and others in charge of children should make a special feature of the cautions which might well be impressed upon the young in regard to the habit of tossing orange-peel on the pavements. There are also "children of a larger growth" on whom such a piece of advice may not be thrown away.

Lead poisoning is often produced in such way that it is exceedingly difficult to trace the origin of the lead. A dressmaker was admitted to the Leeds Dispensary, England, having a distinct blue line on her gums, and other symptoms characteristic of lead poisoning. The attending physician took much trouble to ascertain the source of the poisoning and was unsuccessful until he accidentally learned from a merchant that silk thread which is sold by weight rather than by measure is sometimes adulterated with sugar of lead. He then questioned the patient, and learned that she was in the habit when at work of holding threads in her mouth, and that she had observed a sweet taste in some of the silk. This proved to be the source of the lead which had produced the characteristic symptons.

Original Essays

"Life is not to live, but to be well."—*Martial.*

COTTAGE HOSPITALS.

THEIR CONSTRUCTION.

By G. A. Gibson, M.D., D.Sc., F.R.C.P.E.

SECOND PAPER.

Having now briefly glanced at some of the many services which may be rendered in the cause of health by Cottage Hospitals, we must linger no longer on the threshold of our inquiry, but pass on to the practical question how best to secure that the full harvest of social blessings may be reaped. It is evident that its success will largely depend on the situation and nature of the hospital, and we therefore deal, in the first place, with the manner of its construction.

The size of the hospital must be matter for grave consideration. From the extended observations of the last five-and-twenty years, it has come to be clearly understood that, in rural districts, the accommodation required in a village hospital may be arranged on the basis of allowing one bed to every thousand inhabitants, when the population does not exceed six thousand. If the number of people residing in the district is above the limit stated, the relative proportion of beds must be somewhat increased; for when population becomes larger, disease almost invariably undergoes augmentation at a greater rate.

It is otherwise, however, with an hospital situated in a manufacturing locality, with regard to which Mr. Burdett says:—"From experience gained in a large mining district, the proportion of three to four beds for each thousand *workmen or miners*, and then a calculation for their wives and persons employed in other ways, at the rate of one bed for each thousand persons, does not seen at all too high."

It may be that some cottage already built can be secured for the purpose of conversion into an hospital. If so, it must be dealt with as we shall afterwards indicate. Meanwhile we shall assume that a new edifice is to be erected.

The vast influence exerted by the position of an ordinary dwelling on the sanitary condition of its inmates is surpassed by the effects of locality upon the patients living in an hospital, and for this reason the site must be chosen with great care.

The soils best suited for building upon are those which are of a light and gravelly nature. But such cannot be obtained in every part of the country, and damp soils may be rendered fit for the purpose by careful draining and by the use of asphalte over the foundations, with provision for free ventilation underneath the ground-floor. Steep slopes are not well adapted for building upon, on account of the water which runs down towards the site of the hospital, and which tends to render it damp; but the brow of a gentle undulation is admirably suited to meet every requirement. Not only does such a position allow of perfect dryness of the foundations, but it also gives facilities for the removal of sewage by drains, if that should be the method adopted.

In most small towns and villages it is not difficult to find a stance large enough to afford a piece of open ground around the hospital. In passing we may bestow one word upon the laying out of a clear space,

"With green-spreading bushes and flowers blooming fair!"

through which the sick folk may wander during convales-

cence. The hospital grounds should always be laid out with pretty old-fashioned plants in which the cottager rejoices, and never tortured into assuming the too common Dutch aspect given by "ribbon-borders" and similar devices of the modern gardener.

In choosing the style of the building, respect must be entertained in regard to the fashion in vogue in the district. It would not look well to place the crow-stepped gable and cone-capped turret, which accord so well with the rocky hills of Scotland, upon the gentle slopes of Surrey. Nor should we care to see the quaint houses, with their chequered walls and lattice windows, which seem so home-like on the plains of Salop, amongst the deep valleys of Wales or the north. In the matter of style congruity must be studied, so that the hospital may unite with the buildings around it in architectural harmony.

The same thing may be said with reference to the materials used in the construction of the hospital. Brick walls and tiled roofs are to be employed when the dwellings in the neighbourhood are built of such materials; stone and slate when such is the custom of the district.

Whatever architectural style may be adopted, and irrespective of the size of the hospital, there can be no doubt that the "pavilion system" is the best for the purpose; in the plan, therefore, which we venture to submit as a rough guide in this matter, we shall follow this method.

The cubic space allowed within any hospital should not be less than 1,000 cubic feet per bed when there are several patients in the same ward. If there are only two or three persons, however, in one room, and that room part of a rural hospital surrounded by pure air, 900, 800, or even 700 cubic feet have been found to be sufficient, but in erecting a new building 1,000 cubic feet should be allowed for each patient. Dr. Swete says, "a room for three beds should not be less than 14 ft. by 16 ft., and 10 ft. in height." But in building a new hospital we are of opinion that a room intended for the reception of these patients would be better if it were 15 ft. by 20 ft., and at least 10 ft. high.

The ventilation must be most studiously attended to. Each ward or room in the hospital ought to have an open fire-place. In addition to cross-ventilation by means of the windows, the larger wards should be provided with Sherrington valves or Tobin shafts. We prefer the latter, and, if gas is present, would urge the use also, during winter, of Tait's Thermic Ventilator. By means of this invention, the air admitted is warmed by passing through a heated tube, while no fumes are allowed to enter the room, but are thrown out into the open air.

If the hospital is to be lighted by means of gas, it will be well to make use of Rickett's ventilating globe lights, or else to provide each gas-jet with a bottomless lantern to receive, and a tube to away the products of combustion.

If there are no waterworks bringing water to the district, it should be laid on from a good spring, for wells are not to be depended on. Even when there is a good water-supply it is well to supply means for collecting and storing rain-water for cleansing purposes.

Attached to each ward should be a water-closet, separated by a small lobby or passage (which must be cross-ventilated) from the ward. And a bath also should be provided for the ward. All the pipes belonging to the water-closets must be entirely separate from those of the baths, sinks, &c.

There may be no development of a drainage system, and for the purpose of getting rid of liquid sewage a cesspool under such circumstances, will have to be constructed. It should be as far from the building as possible, at least a yard below the surface of the ground, and thoroughly cemented so as to be perfectly watertight. It ought, moreover, to be of such a size as not to require very frequent emptying.

Each pipe conveying waste from sinks and baths should be provided with a proper bend, to prevent the backward passage of injurious gases; and the drain conveying the liquid sewage to the cesspool must be of well-jointed glazed stoneware pipes.

If there are no sewers in the locality, and, perhaps, even if there are, we would strongly recommend Moule's dry-earth system of removing excrementitious matter. Earth is an admirable absorbent of the gaseous products set free by the decomposition of animal substances. In using this material, care must be taken that the soil used must be carried off every day and dug into the ground without delay. One other caution we would give. Certain enthusiastic admirers of Moule's method recommend that earth which has been used should be dried and afterwards employed a second time; but these ardent champions of the dry-earth system are not unlike the fabled ostrich, for they close their eyes to the approach of danger from the possible spread of disease by the excreta.

HOW TO BECOME THIN OR FAT.

By a Surgeon to Several Metropolitan Hospitals.

FOURTH PAPER.

The hydrocarbons (that is foods containing starch, sugar, &c.), were long believed to be the source from which a large part of the animal fat was made, and this theory was maintained by Liebig. Geese fed on grain become fat; bees form wax, which is a species of fat, from flowers. The herbs and roots eaten by the cow contain no butter, which, of course, is a fatty substance; and though suet, that is beef fat, exists in caseine; and lard (which is pigs' fat), exists in pigs, there is no beef suet in hay and fodder, and no lard in potatoes and roots eaten by swine. Therefore, Liebig said that the fat found in these animals is formed within them by non-nitrogenous substances yielding up their oxygen. The French chemist Dumas states, however, that the Indian corn or maize on which a goose is fed contains 9 per cent. of fatty matter, and on calculating the quantity consumed, he found more fat in it than was sufficient to explain the increased weight of the goose and the subsequent careful and extensive observations of Boussingault confirmed his observations; therefore Leibig had to support his position, and made several very ingenious experiments on swine. He observed that to fatten three pigs in thirteen weeks 1,000 lb. of peas and 625 lb. of potatoes were necessary. These together contain 26 lb. of fat—21 lb. in the peas and 5 lb. in the potatoes. One fattened pig yields on an average 50 lb. to 55 lb. of fat; the three together giving from 150 lb. to 165 lb. Each pig before being fattened contains on an average 18 lb. of fat, that is, 54 lb. for the three. Now, if to these 54 lb. the 26 lb. of fat contained in the food be added, we get 80 lb.; and, if we subtract from the 150 lb. to 165 lb., the amount of fat the three animals yield, we find that 70 lb. to 85 lb. of fat to have been produced from the starch, &c., contained in the food. These experiments have been more recently confirmed by Messrs. Lawes & Gilbert, the well-known agriculturists and stock-keepers, who found that in fattening pigs the animals stored up in their bodies from 400 to 450 parts of fat for every 100 parts of fat in the food. It would seem, therefore, that the origin of fat in the living body is three-

fold: 1, it is derived, ready formed, from plants; 2, it is formed in the absence of oxygen or where oxygen is deficient by the deoxidation of starch, gum, and sugar which supply the oxygen needed; and (3) by decomposition of the albuminoids (or nitrogenous principles) eaten. But this last process has only lately been more fully inquired into.

Liebig's theory has been much contested during the last few years, and there are many objections to it. First, a direct transformation of hydrocarbons into fat has not been obtained either within or without the organism; and thus, although the two groups of the body have a certain number of products of common decomposition, such as acetic, butyric, carbonic acid, water, &c., it is difficult from a purely chemical point of view to conceive how this transformation is affected. On the other hand, the hydrocarbons, if taken alone, diminish the fat instead of increasing it, and if bees, for instance, produce wax, which is closely allied to fat, by feeding on sweet substances, it is because they eat albuminoids at the same time; for if albuminoids be withheld from them they can no longer form wax.

How is this influence of hydrocarbons upon the formation of fat to be explained? Modern researches tend to show that they do not *directly* contribute to the formation of fat but *indirectly*, as they are more oxidisable food stuffs, and prevent the fat produced by the changes in the albuminoids from being oxidised.

The production of fat at the expense of the albuminoids is generally accepted nowadays by physiologists. In Roquefort cheese a formation of fat occurs at the expense of the caseine; and milk exposed to the air also undergoes similar changes. In animals giving suck, nitrogenous food augments the quantity of fat in the milk, whilst the fat is diminished by a fatty or starchy alimentation, so that it would appear more than probable that this transformation is produced physiologically in the organism. Pettenkofer and Voit have observed that on a meat diet all the nitrogen reappears in the excretions; but this is not the case with the carbons, which remain in part in the organism, and probably form a portion of the body-weight. There is, therefore, in the formation of fat a splitting up of the albuminoids into fatty and nitrogenous principles, and these latter only are eliminated in proportion to the decomposition. It has yet, however, to be solved whether this reaction occurs in the albuminoids of the tissues or of those in the food.

From what has been said it would appear that the question of the production of fat in the body is due to two sources: 1, the food eaten; and 2, the direct or indirect action of the albuminoids taken with the food. The production of fat at the expense of the albuminoids is an important matter from a practical point of view, and the fat thus formed, being very oxidisable, would be destroyed by internal combustion if a new and important condition did not intervene to prevent it. This is brought about by the hydrocarbons eaten attracting the oxygen, and by their oxidation preventing that process in the newly-formed fat which then accumulates in the tissues. Everything which diminishes this internal oxidation, such as want of exercise and certain affections of the lungs, will favour the production of fat. If the views just stated were all that is known on the subject, there would be a sufficient reason for the Banting diet, for all that would be necessary to combat obesity would be—first, to suppress the eating of fatty or oily materials; secondly, to increase internal oxidation, chiefly by muscular exercise (which Banting does not appear strongly to recommend, and therefore it can scarcely be called a part of the Harvey-Banting regimen); thirdly, to deprive the oxygen of the blood of highly oxidisable foods because this oxygen, in proportion as it is supplied, prevents the formation of fat by the splitting up of albuminoids, and therefore the hydrocarbons should be almost entirely suppressed. But I shall presently show that experience has proved to me that such a rigid restriction is not necessary.

We come next to the consideration of the factors which play the chief *rôle* in the production of corpulence—*i.e.*, to the study of the *causes* of obesity or excessive fatness.

The Adulteration of Milk.—From the annual reports for last year of the public analysts appointed by the Local Government Board, under the Acts in force against the adulteration of food, it appears that milk has again been found, as in previous years, to be the article of diet most frequently adulterated. It also appears that the milk-supply of London is, on the whole, less reliable than that of the country generally. The percentage of samples of milk found to be adulterated, as compared with the whole number of samples examined, was 19·6 for England and Wales, but for the metropolis it was as high as 24·5, while in certain districts of London more than half the samples were condemned. This bad pre-eminence was obtained by the City and Bethnal Green, while in Camberwell and St. Pancras more than one-third of the samples tested were found to be sophisticated. Of the largest provincial towns, Birmingham is still, as in former years, the worst in respect to its milk-supply. In most places, water was the adulterant. The experience of many epidemics of zymotics has proved that this is a most dangerous admixture, when the water is impure and contaminated with specific germs. In Liverpool, starch and flour-paste have been detected in milk, and, at Reading, turmeric was used to give a false appearance of richness. Grave complaints are made by many public analysts of the inadequacy of the penalties imposed by magistrates on convicted milk-adulterators, and the analyst for the City of London reports that prosecutions have been abandoned in his district on this account.—*British Medical Journal.*

The Greek Sponge-Fisheries. — The Greek sponge-fisheries have been very much developed within the last two years, and at the present time there are 723 boats, 183 of which are provided with diving-bells, employed in this business. These boats, which carry from five to seven men, nearly all belong to the ports of Hydra, Egina, Cranidi, Hermoine, and Trikeri. The fishing season commences in April and ends in August, the boats which are provided with diving-bells going as far to sea as Tunis and Tripoli, while the others do not go beyond the coast of Greece and Crete. The value of the sponges taken during the past season is put at £96,000, nearly half of which is credited to the Hydra boats, while those from Egina took about £27,000 worth of the remainder.

Barnes's Impermeable Opium Poultice, an effective and perfectly safe application for relief in neuralgia, gout, rheumatism, painful swellings, and lumbago. Prices by post 1s. 3d. and 2s. 5d. 1 and 2, Trevor-terrace, Knightsbridge, S.W.—[Advt.]

The "Spécialité" Lime Juice, for family daily use throughout the year, has not the usual musty flavour; will not turn mouldy; may be obtained of Chemists and Grocers.—Feltoe & Sons, Albemarle-street, London, W.—[Advt.]

Hampstead.—High and healthy position, near the Heath. Stanfield House School for sons of gentlemen. Home comforts; and the health of pupils carefully studied. Individual teaching. Principal: Mr. W. R. Marshall (several years' experience), assisted by eminent masters. Prospectus on application.—[Advt.]

Personal Health

"Be timely wise;
With health all taste of pleasure flies."—*Gay.*

ON BRITISH MALE COSTUME IN THE NINETEENTH CENTURY.

By Edward Houghton, B.A., M.D., &c.

(IN TWO PARTS—PART FIRST.)

Without going the length of adopting the views expressed by the late Thomas Carlyle in his "Sartor Resartus" (in which he utterly condemns modern European costume), I may be permitted to indulge in the Englishman's privilege of grumbling, even if there be no hope of reform in this direction for a century or so. Carlyle, as well as I recollect, compares the modern coat to a sack for the trunk of the body, with two smaller sacks for the side members. Much the same might be said of those nether continuations, to which it is said certain members of the female sex are now aspiring. For equestrian purposes, just and sufficient reasons may, perhaps, be given for ladies using the said garments; whilst loose knickerbockers (made to hang over and conceal the fastening at the knee) appear to fulfil all reasonable requirements of comfort and decency, when a skirt of even scanty dimensions is superadded. But, for ordinary use, it may well be doubted whether the long, tight trousers of modern fashionable society are calculated (in any great degree) to promote the comfort, cleanliness, or modesty of either sex. What, for instance, can be said in favour of a mode of fastening clothing in which no provision is made to guard against possible disarrangement (arising from age or infirmity)?

The difficulty of reforming costume certainly does not proceed from a want of imagination or skill on the part of those who have to do with such matters: though, no doubt, certain grotesque suggestions have been made, which make ordinary folk inclined to say that, "after all, we might be much worse off if we once allow new ideas to take root amongst us." This conservative instinct unquestionably has its uses, and serves to prevent ill-considered plans from being hastily adopted. But when it is carried to the length of denying the wisdom of any change in order to prevent foolish changes, it becomes incoherent and irrational, and endeavours to substitute clamour and ridicule for an appeal to reason and common sense. He that will not reason is a bigot,—he that cannot reason is a fool, and he that dares not reason is a slave!

Here is the true explanation of social tyrannies of all kinds. We are first bigots, next fools, and finally slaves. But it needs the quickened apprehension which comes from freedom only to know that every slave is but a tyrant in embryo, "which, hatched, would, as his kind, prove mischievous." Our difficulty in dress reform (as in all other reforms) is a moral one, concerning which we ought to pray that "the eyes of our understanding may be enlightened." If man had not such an inveterate tendency to persecute difference of opinion in social matters, reform would take care of itself; for those inventions which were of proved utility would gradually be adopted, whilst mere eccentricity would be too expensive and troublesome to become a matter of commercial speculation. But, it may be said, this is already the case, and "practically people can wear just what they like." Perhaps there are certain classes who can do so; but it is notorious that comparatively few can brave the social penalties to which they would be subjected, in England, without finding out that the game was not worth the candle.

Perhaps it is a result of our habit of "honouring the weaker vessel," that fundamental changes of fashion have been so marked in women during the last quarter of a century; whilst the tendency in male costume is, on the contrary, towards an ever-increasing grimness, ugliness, sameness, and discomfort. Lecturers have from time to time gone about carping at female eccentricities, and dishing up afresh the old woodcuts of popular physiologists, until the constant piling-up of the agony defeats its own object; especially as women find that they have, on an average, just as good health as men, enjoy life a great deal more, and also attain to greater longevity, notwithstanding the wise shakings of the head, and the anatomical plates (more or less accurate) with which they are now familiar. The truth is that if any man was to adopt a becoming and inexpensive dress in England, and one which could be readily cleansed without injury, he would probably be denied the means of earning his bread in any rank above the level of a crossing-sweeper; and even then he would have a hard time of it. There is apparently no hope of reform in England until other nations have first given the stamp of general approval to some kind of costume likely to be useful in a temperate climate, and which climate is, moreover, liable to sudden changes, both thermal and hygrometric. What is not a little remarkable, however, is that it has not always been so in England; but that in the Elizabethan period a striking improvement took place in male costume, both in England and the Netherlands, as though to indicate that the galaxy of talent which then appeared in science, art, and literature demanded a corresponding outward and visible sign of the nobler humanity within, which was not only covered, but adorned, by comfortable and becoming apparel; which was also conducive to purity of mind and body, without infringing upon dignity or involving an unreasonable amount of trouble.

True, there were certain particulars which were objectionable, as its wearing of stiff ruffs, &c, when in full dress; but these were only the accidents of the costume, and did not form its principal feature; I therefore only mention this period *en passant*, and not with a view of copying it in the details of its ordinary dress. In good truth, I have no pet theory of my own, and only ask for men that liberty of action which women have already attained to, viz, that they may wear anything in reason which they find suitable, without being visited with social penalties for so doing. It is only needful to compare modern female costume in England with that of any former period whatever, in order to see the incomparable superiority of the present average modes over the past, not only in appearance but in general suitability. There is, in fact, such a variety of style that every assemblage of ladies is now rendered much more attractive from this fact alone. And, however much we may condemn some costumes which are the outcome of this liberty, we should remember that, after all, we must pay some price for so valuable a possession; and it is not altogether inexpedient that folly should be allowed to hang out its sign as a warning beacon light, declaring that there is neither head nor heart to be had within.

Restoring the Finish of Leather.—Leather may be restored in colour, if not too far gone, by a slight application of oil. If this is not effectual, put on blacking, let it dry, brush it off, and go over it again very lightly with oil. If very brown, black thoroughly and oil it afterwards, giving it a final dressing of dissolved gum tragacanth.

The Body and its Structure

"The proper study of mankind is man."—*Pope.*
"What a piece of work is a man!"—*Shakespere.*

NO. XXIII.—SOME CURIOUS MOVEMENTS.

By A. J. Manson.

When a thin film of blood is placed under the microscope, it is seen to consist of a fluid as clear as water, in which float an immense number of small bodies, named the *blood-globules* or *blood-corpuscles.* The fluid part of the blood is named the *plasma* or *serum;* and as this fluid is of clear character, it follows that the colour of blood is really due to the corpuscles which float in it. These globules are so numerous, in other words, that to the naked eye they cause the blood to present a red appearance. In man, the red-globules measure each about the 1-3200th of an inch in diameter. The microscope thus really enables us to see in between the globules that float in the blood, and to distinguish the clear fluid in which they float.

In addition to the red globules of the blood, *white globules* exist. These latter are somewhat larger than the red ones, and measure, in man, from the 1-3200th to the 1-1600th of an inch across. They are less numerous in health than the red globules; about one white globule existing to 500 or 600 red. Chemically speaking, each white globule is a little mass of living matter or *protoplasm.* It has a central particle, or *nucleus*, which the red ones ordinarily want, and, indeed, the red globules are believed to represent the central particles (or *nuclei*) of the white ones, set free and coloured. When we study these white globules attentively, a curious phenomenon is observed. They may be seen under special circumstances to alter their shape and to exhibit independent movements similar to those seen in the little animalcule known as the *Amœba.* This animalcule consists of a minute speck of living *protoplasm.* It flows from one shape to another and engulphs food-particles by throwing its soft body around them. When the white globules of the blood are watched, their movements so closely resemble those of the *Amœba*, that they have been called *Amœboid* movements; and it may be said that such a mode of motion in these globules forms one of the most interesting and curious facts of physiological study.

As shown in Figure 1, a white globule may be seen to exhibit a constant change of shape, when the film of blood under the microscope is maintained at the temperature which is natural to the blood as it circulates in the body. It is seen slowly to contract and expand; to alter its shape, and thus to make its way across the field of the microscope. The various shapes it may assume are shown in the illustration. This power of movement, it should be borne in mind, is natural and proper to the globule. In life, and as they exist in countless numbers in the blood-vessels, these changes of shape proceed incessantly. Nor is this all. As the *Amœba* itself receives food-particles, so a white blood-corpuscle may be seen to receive and absorb particles of any colouring matter which is brought in contact with it, and, like the *Amœba*, these globules may divide in two, each particle becoming a new corpuscle.

In 1846, Dr. Augustus Waller announced the fact that both red and white blood globules could pass bodily through the walls of the minute blood-vessels of the tissues; but it is the white globules which appear to accomplish this feat as a phase of their natural life. These little masses of living protoplasm insinuate themselves through the wall of the vessel by a process which has been thoroughly studied. Dr. Burdon Sanderson remarks that a blood-vessel is itself a soft vital tube, such as offers no impediment to the passage through it of a mass of soft living matter. It is thus curious to think that a human body harbours millions of minute living specks in the shape of white blood corpuscles, each of which possesses a life and vitality of its own independent of the larger life of the body itself. The discovery that these corpuscles can thus migrate from place to place within the living frame, serves to explain their occurrence in situations which physiologists might otherwise regard as of unnatural and unusual kind.

Closely related in some respects to the movements of the blood-globules are the motions of *cilia.* When the lining membrane of the windpipe and bronchial tubes of the lungs

Fig. 1.—Movements of a White Blood-globule.

is examined, or when we look at the gills of the oyster or muscle, under a high power of the microscope, we notice that the cells which compose these structures are provided at their free edges each with a fringe of delicate processes, resembling fine hairs in appearance. These processes are the *cilia.* They vary in number from ten to thirty on each cell. Seen in the living state, they are noted to be in constant movement; the cilia waving backwards and forwards in such a manner as to give the impression to the observer's eye of the waves that pass over a field of corn disturbed by the wind, or the continuous succession of the waves that roll inwards, and apparently disappear on the sea-beach. The movements of cilia are entirely independent of the will and of the nervous system at large. They continue their movements for hours after death, or after removal from the body, when they are kept moist; and a single *cilium* thus comes to represent in itself a veritable apparatus whose movement is of automatic kind.

In length, the cilia vary from the 1-5000th to the 1-320th of an inch. Our illustration (Fig. 2) shows cilia

Fig. 2.—Ciliated Cells.

borne on the cells of the mouth of the frog in the left-hand figure, while those of the lining membrane of the human nose are shown on the right. Wherever cilia are developed, it is evident their function is that of creating currents in air or in the fluids amidst which they are placed. They thus serve in the windpipe and lungs to waft upwards to the mouth the moisture which otherwise would accumulate in the air-passages, while in the gills of the oyster or mussel, their use is that of sweeping currents of water into the shell for breathing-purposes, and for wafting out of the shell the water which has served its end in the economy of shellfish life. In the frog, the cilia contract about twelve times per second when they are in full vigour; and we know that, like the animal body of which they form part, cilia consume oxygen gas as a condition of their activity.

Regarding the *causes* of ciliary action, it may be added

that as each *cilium* is a minute thread of living matter or *protoplasm*, and as this substance exhibits "contractility," or the power of shortening itself as one of its primary qualities, the movements of cilia must be referred simply to their inherent power of contraction. Each cilium merely bends, however; it does not grow shorter, as does a fibre of muscle. Possibly a band of contracting substance runs along each side of the cilium, and by the alternate action of such bands, the little thread is made to bend and to rise again to its erect position. Whatever may be the exact method of the action of the cilia, the fact of their incessant action remains a prominent feature of the curious life that rolls onwards through the tissues of living beings. And that life is none the less interesting, but rather the more so, because its details are carried out in the field of the infinitely small and amongst the microscopic units that make up, by their collective existence, the life of the body as a whole.

CHINESE AND SURGERY.—The Chinese stand surgical interference wonderfully well, and submit to painful operations in a manner wonderful to witness, thus resembling our Indians. Only in major cases is an anæsthetic administered. Once consent is obtained, confidence is absolute, and they are passive in the hands of the surgeon. During the past autumn (1880) excision of the ribs has been frequent, as disease of these bones appears to follow the famine fever in many cases. The Chinese, as a rule, object to surgical treatment in cold weather, no doubt owing to the fact that they have to furnish their own bedding and pay for warming the bed occupied. It was judged best in building the hospital in question (Tien Tsin) to follow the native architecture as nearly as practicable, to allay all prejudice possible, and thus the beds are constructed of brick, with a fire-place beneath, in which straw, hay, and brush are burned for heating. Thus each patient has his own fire, and his food is cooked by it in utensils furnished by himself. A most extraordinary custom is carried out by this strange people, which I have not noticed in any of the books or reports concerning them. As soon as it is judged a person is dying, he or she is removed from the house to the open air, no matter what the weather may be. Should death take place unexpectedly within a residence, the inmates depart immediately, as they have the utmost horror of the ghost of the defunct. In the general hospital it is absolutely necessary to remove all moribunds, for if a patient perishes in a ward, the occupants all take flight, and no one will knowingly sleep in the room afterwards. This circumstance often causes great embarrassment to the surgeons.

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The Family Circle

"The child is father of the man."—*Wordsworth.*
"In bringing up a child, think of its old age."—*Joubert.*

SHORTSIGHTEDNESS: ITS CAUSES AND PREVENTION.

BY HENRY POWER, M.B.LOND., F.R.C.S.ENG.

(From the *Lancet.*)

THERE can be no question that the Germans are particularly liable to myopia. One of their own nation has said that at a great International Congress he had no hesitation in addressing, in German, a man wearing strong concave glasses, because he was certain he should meet with a brother, proving incidentally that the disease is rare in other nations. It is reasonable to inquire, then, what are the special conditions to which Germans are exposed that render this defect of vision so remarkably common amongst them. The answer is, that up to a very recent period the Germans began to work their children at a very early age; that they gave them long and severe lessons, many of which had to be learnt at night; and that the amount of light supplied to them was insufficient—in other words, that with imperfect illumination they made great demands upon the accommodation of their children's eyes, and that this strain was augmented by the bad type and paper that were in use for school-books. Each of these points deserves consideration, and it may be remarked that the Germans are fully alive to the great, and indeed national, importance of the subject. They have discussed the whole matter in a thoroughly scientific spirit, and we are indebted to them for numerous suggestions, which should be adopted in our schools if we wish to preserve the eyes of our posterity in a healthy condition.

The amount of light, both of day and artificial, that is supplied in schools is a matter of great importance, for it is acknowledged on all hands that the feebler the light the closer is the object instinctively brought to the observer to be recognised, and amongst the various suggestions of a practical nature that have been made is one by Hoffmann, of Wiesbaden, that in every schoolroom a set of Snellen's test types should be suspended, and as soon as they are no longer legible by the healthy at a normal distance the school should close. In school buildings the windows should, if possible, look to the south or east, a much greater amount of light entering with equal window space from those directions, especially in the earlier hours of the day, than from the north, whilst type of a given size is read at a much greater distance with south than with north light. Cohn and Javal alike think that it is almost impossible to get too much light in a schoolroom, the latter maintaining that there should be sufficient light in the darkest part of the room to read easily and well even on dark days. The size of the window must manifestly exert a great influence upon the amount of light admitted, and Cohn has laid down the rule that there should be at least one square foot of window pane for every five square feet of flooring, and in some recent Parisian models there is actually one foot of window to each foot of flooring. The height of the window from the floor is of importance, since a room is always dark with high windows, owing to the obliquity of the entering rays and the loss by reflection; the sill of the window should not be lower than one foot from the ground. It is acknowledged that the light should enter from the left hand, since it enables the letter that has just been formed in writing to be distinctly seen; whereas, if the light enter

from the right, the last written letters are in the dark. The total area being the same, three windows are better than two, for since the illumination obtained from a given light diminishes as the square of the distance, more light will be obtained in the remoter parts of the room with three than with two lights.

The form of the desks and school furniture is a point that has been almost entirely neglected in England. In many schools they are just what have been run up by the village carpenter in the simplest and most solid form compatible with cheapness that can be conceived. The slope of the table is of importance. If a book be placed vertically in front of us, we can read well, and no inclination of the head is required. If it be placed at such an inclination as to form an angle of 45° with the horizon, we can still, by turning the eyes down, read well without inclining the head; but if the book is placed horizontally, the head is naturally bent downwards to relieve the exertion of turning the eyes strongly downwards, and this tends to congest the vessels of the head. Hence the desk should be inclined, and not flat; but an angle of 45° would be too much, the books, &c., would slide off. A rise of two inches for each twelve inches of table breadth is sufficient. Fahrner considers that the first movement of the child in leaving the normal position consists in inclining his head forward and to the left, and that this apparently unimportant movement is the root of the whole evil; for it in the first place causes the centre of gravity of the head to fall in front of the vertebral column. The muscles of the neck are consequently called into play; they soon, however, become fatigued, and transfer the work to the muscles of the back, and thus at the expiration of a few minutes the head sinks upon the left arm, and the eyes are brought into very close proximity with the paper. All physicians are now agreed that the desk should be a little higher than the elbows when hanging naturally, and that the size of the child or youth should be taken into consideration.

Teeth in Old Age.—Some old folks cut their teeth when far advanced towards centenarianism. An old woman named Dillon, living near Castlerea, in Ireland, cut an incisive tooth in the lower jaw when seventy-five years old; it confirmed a strange hallucination with which she had long been possessed—that she had been dead, and was come to life again, with the usual infantine career of teething, &c. Mrs. Fussell, living at Acton about a dozen years ago, cut an entirely new set of teeth when about eighty years old, after having been many years toothless. In 1732, Margaret White, of Kirkcaldy, in Scotland, cut eight new teeth in the seventy-eighth year of her age, thus winding up a toothless period of many years. Mrs. Page, a dame of Southwark, after being toothless from the time she was seventy till she was ninety years of age, cut several new teeth.

The Hygienic Protection of Paris Children.—By recent decrees it is forbidden to employ boys under sixteen years old, or girls under eighteen, to furnish the power for hand-looms. Boys between twelve and fourteen years of age, and girls between twelve and sixteen, must not be made to draw loads on the highways; but this is allowed on the level floors of manufactories, &c., provided the load and the vehicle together do not weigh more than 100 kilogrammes. Boys only, when over fourteen years old, may be employed to haul loads on the highway, provided the load and vehicle together do not exceed 100 kilogrammes in weight. Tilers and plumbers are forbidden to employ children on roofs.

Healthy Houses

"A happy home must be a healthy home."—*Anon.*

VENTILATION AND SANITARY FALLACIES.

By Dr. Thomas J. Hutchinson, F.R.G.S.I.

(Corr. Mem. of Anthropological Society at Florence, &c., &c.)

VENTILATION IN SLEEPING-ROOMS.

Besides what we have learned from the bees, the indispensable necessity for fresh air during our sleeping hours has been demonstrated by Florence Nightingale during her Crimean experiences, and is set forth in her "Notes on Nursing." It may be further verified by the following facts:—If two persons are to occupy the same bedroom during a night, let them step upon weighing scales, as they are about to retire to bed, and then again do the same thing in the morning. They will find their actual weight to be for each at least a pound less at the latter period. Frequently there will be a loss of two or more pounds, and the average loss throughout the year will be more than one pound per night—that is, during the night there is a loss of one pound of matter, which has gone off from their bodies, partly from their lungs, and partly through the pores of the skin. The escaped article is carbonic acid, and decayed animal matter, or poisonous exhalation. This is suffused through the air in parts, and in parts absorbed by the bed-clothes. Now, if a single ounce of cotton be burned in a room, it will so completely saturate the chamber with smoke that one can hardly breathe, although there is but a single ounce of foreign matter in the air. Should an ounce of cotton be burned every half-hour during the night, the air would be kept continually saturated with smoke, unless there could be an open door or window for it to escape. But the sixteen ounces of smoke thus formed by the cotton burning are far less poisonous than the sixteen ounces of exhalations from the lungs and bodies of two persons who have each lost a pound in weight during the eight hours of sleeping. For while the dry smoke is mainly taken into the lungs, the damp odours from the body are again absorbed into the lungs as well as into the pores of the skin. A little more thoughtfulness would impress upon every one the importance and necessity of having sleeping-rooms well ventilated. Air should be admitted in not only during the day, but whilst we are asleep. Another very important item of the health of our beds is that every morning, after getting up, the sheets, blankets, and other coverings should not be rearranged without being left about for a few hours. It would be a great advantage if they could be aired for that space of time. This may seem a trifle, but trifles make up the sum of our health, comfort, and existence.

SANITARY FALLACIES.

There is no greater fallacy than the opinion held by many—particularly the young, and strong, and vigorous—that winter, especially a sharp, frosty one, with plenty of ice and snow, is the most healthy season of the year. Very few persons seem to realise the facts, that cold is the condition of death, whilst heat is that of life. In warm as well as cold climates, it is our unconscious effort to maintain our bodily heat at a temperature of 98 degrees that wears us out. To this temperature, called "blood heat," every cubic inch of oxygen that serves to vitalise our blood must be raised by our own bodily heat, or life ceases.

Since in cold weather the maintenance of a sufficiently elevated bodily temperature becomes very often a difficulty too great for our strength, the advent of a severe winter is quite as much to be dreaded as the visitation of a pestilence. Besides this, children should not be sent out to walk of a morning before breakfast in a cold wind, especially with an empty stomach, as they get chilled, and it does the system a great deal of harm. A like rule should be observed in malarious countries, be they tropical or not, that on no urgency should children or grown-up people go out in the early morning without a cup of tea, coffee, or chocolate taken beforehand. For in tropical countries, more especially, the price of health is eternal vigilance.

As a well-known professor was one day walking near Aberdeen, he met an individual of weak intellect. "Pray," said the professor, "how long can a person live without brains?" "I dinna ken," replied Jimmy, scratching his head. "How auld are ye yourself?"

RATE OF DIGESTION IN STOMACH.—According to A. Kietz, during the first hour of digestion lactic acid is not present in notable quantities, but the acid present is hydrochloric. The appearance, sooner or later, of free acid is dependent on the quantity and quality of the food, as well as on the idiosyncrasy of the individual.

MORPHIA V. DOG POISONING.—An American M.D., writing to a Transatlantic contemporary, complains bitterly of dog poisoners, but says he has saved many of his dogs by hypodermic injections of morphia. He counsels every sportsman to keep a hypodermic syringe in his pocket, or close by, and with it two or three papers, each containing two grains of sulphate of morphia. When rigid back and intermittent spasms indicate disaster, without delay, dissolve the contents of a package in a teaspoon with a little water projected from the syringe, which can be warmed to dissolving point over a lamp or lighted match. Suck it up through the nozzle again, and insert the same through the skin into the loose tissue beneath it, raising up a fold for the purpose from the ribs or shoulder. If the dog is not very far gone, the entire contents of the stomach are instantly vomited, thus leaving only the amount of poison already absorbed to contend with; and the medicine, besides its first emetic effect, is one of the best antidotes, and will produce its full effect, whereas, if introduced by the stomach, would probably remain inert, owing to the general paralysis from the strychnine, this being almost the only poison employed, and the only article of access to the public that will have any certain action on dog, wolf, or others of the canine family.

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Recreation and Health

"Health is the vital principle of bliss,
And Exercise of health."—*Thomson.*

PHYSICAL EXERCISE.

BY C. W. CATHCART, M.B., F.R.C.S.

(*Lecturer on Anatomy in the Edinburgh Medical School.*)

THIRD PAPER.

(*Continued from* No. 26.)

CRICKET AND FOOTBALL.

WE propose now to consider shortly some of the games and athletic exercises which require more violent exertion, and may take as examples cricket, football, rowing, fives, and athletic sports. Many others might have been added, but these will furnish us with sufficient text for what is wanted.

Cricket may be truly called the national game of England. It is played alike by rich and poor in every part of the country, and has been recognised as the standard summer game of the people from generation to generation. For the history of the game, and for the rules under which it is played, and for hints as to how best to learn it, our readers must refer to some of the many treatises on cricket which have from time to time been published. All that concerns us at present is to consider it from a health point of view, so far as that falls within our reach. We do not often hear of injuries from strains or falls among cricketers; and, although blows from the cricket-ball are occasionally serious, still the accidents, as compared with the numbers who play, have not been sufficiently numerous to occasion any anxiety or give any ground for suggesting alterations in the rules. The exercise afforded by it is excellent, although in the various movements required for batting, bowling, and fielding, the action of the left arm and left side of the chest is hardly enough brought out, the most of the work being done by the right side. Activity, quickness of hand and eye, coolness, and decision are required at every turn.

It is a drawback to the game in some ways that so many hours are required continuously for its matches. This prevents those whose spare time is limited from taking part in it. However, time is necessary for the proper playing of the game, and, therefore, when school-days are over, and long recreation hours not available, young men must, if need be, seek some form of exercise which can be taken in a shorter time. But, besides this so to speak necessary drawback, there are others which might easily be removed, but which are often obstacles to those whose purse is limited. Such deterrent expenses are the costly lunches to the opposing side, and the presents to the successful bowlers and batters, which are multiplied in some clubs to an unnecessary extent. It would be well if, in respect to lunch, the example of most of the Highland curling clubs could be followed, where, after a hard morning's play the laird and the ploughman, the minister and the banker's clerk, can enjoy their bread and cheese and beer together before starting again for the afternoon.

Cricket in itself is admirable. Let any unnecessary obstacle to it be removed, and we may trust that as long as it remains as it is—one of the symbols of manly, healthful exercise—it will keep an unbroken sway among our summer games.

If we turn our attention to football, we shall find more subject for discussion, for there is no doubt that a certain proportion of accidents do occur in the game, and

this leads many to doubt whether the game is not too rough, or at least whether some change in the rules might not be suggested which might lessen the risk of accidents. In considering the question, we must bear in mind that football is wanted for the winter months. It must be played, therefore, in weather which demands continuously active exertion from the players. In this respect it differs from the summer game of cricket, where the players can remain inactive after sharp exertion with little or no risk of chill. We must not forget, too, that in winter, when the light is short and work more pressing, it is desirable to have some form of exercise which does not occupy too much time, and we find that football fulfils both these conditions—in fact, the one follows from the other. Football is such that it can be played in all weathers, except when snow covers the ground or frost hardens it, and affords an exertion so continuous and severe that from an hour and a half to two hours is as long as any one cares for in a day. To these advantages we have this one—that the game provides for the exercise of a considerable number at one time. This also combined play is a necessity, and unselfishness is called out in addition to the manliness, pluck, and endurance which the activity of the game requires. Let us also remember that one of the special points is, that there is one ball which is the common object of attraction among all the players; and we may now begin to consider the question in reference to the accidents.

To put it briefly, we have a game for lads or young men in vigorous health and rejoicing in the active use of their muscles, played in weather which stimulates and requires an activity which, from the condition of things, is often chiefly expended by the players on each others' persons; can it be wondered if the exertion is at times misdirected, and strains and bruises result? How far these are a necessary accompaniment, or how far they may be diminished—how far even with them the gain in health and manliness to the large majority is compensated for by the injury to the few—are questions which are deserving of consideration.

It is well known to most people, but not familiar to all, that the term "Football" includes two games, which differ considerably in the way in which they are played. In the Rugby form the player is allowed to take the ball under his arm, and run with it towards his opponents' goal, while the other side may do their best to hold him, and take the ball out of his hands. In the Association Game no one except the goal-keeper is allowed to handle the ball under any pretence, all management of the ball being done by the feet alone. From these points of difference many rules are framed, so that the character of each game comes to be considerably different, and the aspect of each to a spectator is quite distinct. In the Rugby game the arms, shoulders, and chest are much exercised in the efforts to throw off opponents while a player is running with the ball, or while endeavouring to "collar" one who has already got it. Many tumbles are the result of these manœuvres, but they are more of wrestling fall than a complete throw, and are not nearly so heavy as they may at first seem. Tight scrimmages, too, are a peculiar feature of the Rugby game, and are the means by which the ball is brought into play again after a player has been running with it and has been "held." They consist of the forward players of each side wedging themselves together into a compact mass, and trying to push back their opponents, who are similarly arranged, the ball having previously been placed between them. After a few minutes' violent effort, one or other side usually gives way or the ball gets loose, in which case the scrimmage breaks up, and the game goes on as before.

Under the Association rules, on the contrary, since the players are not allowed to use their hands or arms, there is no wrestling, and tight scrimmages are never formed. Consequently the game is much more open and free, the ball being always on the move, as it is passed from one player to another. But while the wrestling falls do not occur, what we may call complete throws are more common, for now, when a player wishes to upset an opponent when both are making for the ball, he must do it by a direct charge, or by a combination of charge and shoulder throw, which often results in heavy falls at full length. Another point to be borne in mind is that since the ball may not be handled, efforts are often made to kick it while it is still in the air, and this brings the foot of the kicker frequently into dangerous proximity with an opponent's body, should he be in the way. Fortunately, however, accidents from this cause do not often occur, although there is a risk of them.

Some time ago a writer published a book, entitled "What will my Boy be?" and a certain reviewer said of it, "If your boy turns out no better than your book, he'll be hanged." A lecturer in Kentucky has announced as his subject for a lecture, "What shall we do with our Girls?" How would it do to give them three square meals a day, make them wear clothing that fits them easily, keep "yellow-covered" books and papers from them, prevent them from hiding their foreheads with hair, and try to raise them to help their mothers in all household affairs until they are called to help their husbands? We merely suggest, and do not dogmatise.

The importance of careful and efficient ventilation of the rooms occupied by children can hardly be over-estimated. The air of a closed room soon loses its freshness, even when unoccupied. Chemically the proportion of oxygen may not be appreciably altered, but the more active, or ozonised, part of it is changed; innumerable particles are brought into contact with it which, if not "stealing and giving odours," may add what is imperceptibly injurious, and will certainly take away from it the quality of freshness. Movement of air through a room is a first essential of ventilation; then the quantity and rate of movement has to be considered, taking care that the temperature and other qualities are so preserved as to be both pleasant and wholesome.

Brain-Weight of Boys and Girls.—In the final result of the comparison of the two sexes in the human race, anatomical researches will form an important factor. Many anatomists have recognised this fact, and have instituted comparisons between the sexes from various points of view. M. Gustave le Bon reviews the work of M. Manouvrier and that of M. Budin, both of whom aver that "sex has no influenee on brain-weight. With them the influence of sex is nothing more than the influence of height; and if the females, as a whole, exceed the males in brain-weight, it is simply because the weight of the body in the females is much below that of the males." M. le Bon puts the theory of his adversaries to the test in a very ingenious manner by comparing the brains of males and females having about the same weight. By this investigation it is shown that in the great majority of cases the male children surpass the females of the same weight in their cranial circumference. At the same age, height, and weight of body, the female brain is notably smaller than that of the male.

Jottings from the Journals

"Th' ingredients of health and long life are
Great temperance, open air,
Easy labour, little care."—*Sir Philip Sidney.*

VEGETABLE WOOL.—The *Moniteur des Fils et Tissus* calls attention to a description of vegetable wool called "Kapoc." It comes from Java, and a specimen is on view at the Amsterdam Exhibition. It arrives at Amsterdam in its leathery covering, being itself enveloped in the seeds. It is then freed from both, and is carded so as to make a very light mattress wool, worth about 8¾d. per pound. One of the houses engaged in this operation has made trials in spinning and dyeing this material, but the filaments are said to be like strings, and their industrial application consequently a matter of uncertainty.

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"HOW THE POOR IN LONDON LIVE."—Under this heading the *Echo* of Sept. 28, 1883, published a statement, from which we reproduce the following particulars:—"Out of 2,290 persons, living in consecutive houses at Bow-common, only 88 adults and 47 children attend any place of worship; while in one street, near Leicester-square, containing 246 families, only 12 are said to be represented in church or chapel. The condition of some of their homes is said to be 'pestilential.' To get into them you have to visit courts which the sun never penetrates, which are never visited by a breath of fresh air, and which never know the virtues of a drop of cleansing water. In one cellar was found, a father, mother, three children, and four pigs. In another room was a man ill with small-pox, his wife just recovering from her eighth confinement, and the children running about half-naked and covered with dirt. In an underground kitchen seven persons were found living, and a little child lying dead in the same room; while another apartment contained father, mother, and six children, two of them being ill with scarlet fever. Immorality is but the natural outcome of conditions like the above. The poverty of many, who strive to live honestly, is described as appalling. In St. George-in-the-East large numbers of women and children, some of the latter being only seven years of age, were employed in sack-making, for which they got a farthing each, while in one house a widow and her half-idiot daughter were found making palliasses at 1¾d. each. Another woman, who has a sick husband and child, was found employed at shirt finishing at 3d. a dozen, and by the utmost effort can only make 6d. a day, out of which she has to find her own thread!" These are, indeed, disquieting, and it is not too much to say discreditable, facts. Much has been done to discover, and either destroy or amend, conditions of life so deplorably insanitary, as those described by our contemporary, but it would seem that much more remains to be accomplished. It is manifestly impossible that the poor can live healthily or honestly in such habitations, and by such ill-paid labour as is represented above. It is well that the facts should be known, though they are not less humiliating than sickening. With all our boasted care for the health and happiness of the humbler classes of the population, we are clearly guilty of terrible neglect, or such things could not be. When will the Legislature have time to think of the pressing needs of domestic legislation and the real grievances that lie nearer home even than those of that most troubled and troublesome spot of earth—Ireland?—*Lancet.*

Our Bookshelf

"Reading maketh a full man."—*Bacon.*

A TEMPERANCE READER.

Drink and Strong Drink. A Series of Readings for Schools and Families. By BENJAMIN WARD RICHARDSON, M.D., &c. (London and Glasgow: W. Collins, Sons, & Co., Limited)

THE *raison d'être* of this little volume was a suggestion of Sir William Collins, of Glasgow, that Dr. Richardson should write a class book for the advanced young on the nature of alcohol. We can well understand the temptations which would beset many an unwise reformer, or a less learned writer than Dr. Richardson, to make capital out of such a topic; but throughout the pages of this Reader the author is always candid and everywhere scientific. Interspersed throughout the book is a vast amount of physiological and chemical knowledge, the acquisition of which by the pupil who reads this work will form no slight gain in education. There are one or two passages which, in deference to chemical authority of by no means slight kind, might have, with justice, been modified. The expression (p. 145) that alcohol "is a chemical substance, and distinct from a food," would almost lead the reader to suppose that a food is not a chemical substance. Again, it is somewhat stretching a point to declare that alcohol is not a food, seeing that diversity of opinion still exists on the point—we say this much, believing, ourselves, that Dr. Richardson is right. In a reading book intended for advanced pupils there is no need to enter into controversial matters. The volume will admirably serve its purpose as an exposition of the virtue and safety for the young which reside in habits of temperance and abstinence formed early in life.

A BOOK FOR NURSES.

Putnam's Handy Book Series—A Manual of Nursing, prepared for the Training School of Nurses, attached to Bellevue Hospital. (New York: G. Putnam's Sons.)

THIS is an excellent manual; admirable in its conception, and thoroughly carried out in its details. Every point which a nurse should know, from the observation of the sick, undressing a patient, to the conduct of special operations, is here fully treated, and described in language at once plain and forcible in its character. We have carefully perused the instructions and directions contained in this manual, and are able to accord to it the highest praise. The spirit of even the appendix reflects the thorough character of the book, as may be seen from the following quotations:—

IMPORTANT THINGS FOR EVERY NURSE TO REMEMBER WHEN SHE GOES TO PRIVATE CASES.—Remember to be extremely neat in dress; to have the hair smooth, and caps and aprons clean; a few drops of hartshorn in the water used for *daily* bathing will remove the disagreeable odours of warmth and perspiration.

Never speak of the symptoms of your patient in his presence, unless questioned by the doctor, whose orders you are always to obey *implicitly.*

Remember never to be a gossip or tattler, and "always to hold sacred the knowledge which, to a certain extent, you must obtain of the private affairs of your patient, and the household in which you nurse."

Try to give as little trouble to the servants as possible, and make them feel that you have come to help them in the extra work that sickness always brings.

Never contradict your patient, nor argue with him, nor let him see that you are annoyed about anything.

Never *whisper* in the sick room. If your patient be well enough,

and wishes you to talk to him, speak in a low, distinct voice, on cheerful subjects.

Write down the orders that the physician gives you as to time for giving the medicines, food, &c.

Give an account of your patient to the physician in as few words as possible.

Keep the room bright (unless the doctor *orders* it darkened).

Let the air be as pure as you can, airing it from outside, "as windows are made to open."

Keep everything in order, but without being fussy and bustling.

The only way to remove dust is to wipe everything with a damp cloth.

As an additional example of the thorough spirit in which this work has been planned and executed, we select the passages dealing with "faintness" and "foreign bodies" respectively. From these extracts, it will be seen that the nurse who is armed with this manual possesses a full and trustworthy guide to the treatment of emergencies :—

FAINTNESS.—In any case of faintness, the patient should be at once placed in a recumbent position, all tight clothing about the neck and chest be loosened, and a supply of fresh cold water secured. If there be only slight faintness, it may be all that is necessary to place the patient in a cold draught of air. Where there is complete loss of consciousness, water dashed on the face or chest, or applied by means of a wet towel, striking the palms of the hands and rubbing them rapidly, are good means of restoration. A plate may be dipped in hot water and placed over the stomach. Smelling-salts, or any preparation of ammonia, should not be used too persistently, as they are liable to injure the lining membrane of the respiratory passages.

FOREIGN BODIES.—When anything has lodged in the throat, causing choking or suffocation, a smart blow on the back between the shoulders will in many cases send the substance out of the mouth. Should this fail, hold up the body by the feet (in the case of a child) and let another person strike between the shoulders with the open hand. This process should only last for a moment. Look in the throat and see if the substance can be reached; seize hold of it with the thumb and finger, or a pair of blunt-pointed scissors, and pull it out. If there is only a small substance in the throat, causing a troublesome tickling cough, give bread, followed by a drink of water, and if this is not sufficient, give a little mustard and warm water as an emetic, and after vomiting there will probably be no further trouble.

In the Nose.—When any small article, as peas, beans, pebbles, &c., have been pushed into the nose, they may often be removed by snuff, or any other substance which will produce sneezing, being introduced into the opposite nostril, or by the use of a pair of forceps or blunt-pointed scissors, care being taken not to push the substance back into the throat. Peas and beans are the more dangerous, as they increase in size by the absorption of moisture.

In the Ear.—Insects in the ear are removed by plugging the external opening with a piece of cotton saturated with a solution of salt or vinegar, so as to prevent the admission of air. Then let the patient lie on the affected side, and press the hand firmly on the ear. After a few minutes the insect may be found imbedded in the cotton. Or lay the patient on the opposite side, and fill the ear with oil. A small stream of water from a syringe will often remove small bodies or sand. If any substance can be readily seized with the forceps, they may be used for this purpose; but very little force must be used, or the substance will be pushed still further in, rupturing the drum of the ear, and permanent deafness would be the result.

In the Eye.—For the removal of dirt, sand, &c., from the eye, it will often suffice to lift the upper lid away from the eye-ball by taking hold of the lashes, drawing it down over the lower lid, and allowing it to slide slowly back. Then wipe the edges with a handkerchief to remove the foreign body from the lashes. Or, take something hard, like a knitting-needle or pencil, and press it across the outside of the upper lid, then take hold of the lashes and make the lid turn over the pencil, and the substance will generally be seen sticking to the delicate membrane which lines the lids, when it can be gently washed or rubbed off.

COSTLY DOGS' FUNERALS.—The dog fever in America has got to such a high pitch that costly and elaborate funerals are given to pet dogs. This custom, *Forest and Stream* complains, is growing, is most disgusting. Common sense, it says, "should come to the rescue of such sickly sentimentality."

Sanitary Appliances, Etc.

HARD'S "FARINACEOUS FOOD."—We have subjected to a careful examination samples of this food which have been submitted to us. The "food" is a preparation containing a high percentage of the true flesh-forming and nutritive principles which are of such supreme importance in the nourishment of both invalids and children. Foods of this kind are often overloaded with starch or arrowroot, and for young infants starch in any form is a thoroughly indigestible food. Hard's "Food" may be safely commended to all as a safe and excellent means of preparing many admirable dishes and meals. In the cure and prevention of constipation and other digestive disorders, Hard's "Farinaceous Food" will be found invaluable.

BRAGG'S "CHARCOAL BISCUITS."—Few persons are probably aware of the valuable properties which charcoal holds in the *Materia Medica* of not only the physician, but of the household. It constitutes a form of the element *carbon*, and may be obtained either from wood or from the bones of animals. Mr. Bragg's "Charcoal Biscuits" are prepared from the purest vegetable charcoal, carefully selected, and freed from all extraneous matters. The value of charcoal has long been appreciated in diseases of the stomach and digestive tract generally. In cases of dyspepsia or indigestion, associated with foul breath, eructations of gases, and especially with acidity, the use of these biscuits is found to effect a cure. Where flatulence and oppression are experienced after food, the use of a biscuit or two relieves the disagreeable symptoms; the form of this biscuit being an agreeable fashion of administering the charcoal. Again, in cases in which there is reason to suspect the existence of stomach ulceration or of certain parasitic diseases of the organ, the use of charcoal biscuits is indicated. Charcoal has a wonderful power of absorbing deleterious gases into its pores, and when eaten under the circumstances above described, Bragg's "Biscuits" tend to destroy deleterious principles, and to sweeten the secretions on the perfection of which the digestive powers depend. In many of the stomach disorders incidental to childhood, the use of charcoal is found to be highly beneficial, and children readily take these biscuits when the administration of charcoal as a powder would be both disagreeable and difficult. The biscuits are prepared by Mr. Bragg, 14, Wigmore-street, London, W., and may be had of chemists and others in tins. The pure vegetable charcoal is also manufactured by Mr. Bragg, and is highly useful where the powder itself is required for administration.

THE PERFORATED TOILET PAPER AND HOLDER.—This is an ingenious invention whereby a roll of prepared paper for toilet use is suspended in a neat frame or holder, capable of being readily fixed on a wall or elsewhere. The paper is of good quality, and the price of this useful little domestic contrivance is extremely moderate. The holder and paper are manufactured by the Perforated Paper Company, 12, Long-lane, West Smithfield, London, E.C.

THE SWISS DAIRY COMPANY'S "PURE CONDENSED MILK."—This brand of condensed milk should take a high rank amongst the various products of the kind now in the market. The feature which commends this milk is the absence of the sugar with which such products are often loaded, to the detriment of the consumer. In the case of infants, the lack of sugar in milk is an important feature, the ordinary condensed milk, which contains sugar, tending to produce acidity. The "Baby Brand" of the Swiss Dairy Company appears, therefore, to present consumers with a pure article of its class. As such it may be recommended to the notice of all who consume condensed milk.

AN Irishman once received a doctor's bill. He looked it over carefully and said he had no objections to paying for the medicines; but the visits he would return.

AN association has been formed in Paris to protest against the eating of American lobster, on the ground that the animal is tortured by being put into the pot to boil while it is alive. The badge of membership is worn on the arm, and is in the form of a lobster holding in its claw a card on which is displayed the word, "Thanks."

"WELL, madam, how's your husband to-day?" "Doctor, he's no better." "Did you get the leeches?" "Yes, doctor, but he could only take three of them raw; I had to fry the rest."

Our Letter : Box

"Conference [maketh] a ready man."—*Bacon.*

NOTICES TO CORRESPONDENTS.

All Communications for the Editorial Department (including specimens of Sanitary Appliances, &c.), to be addressed to "THE EDITOR OF HEALTH," 74-76, *Great Queen-street, London, W.C. Those intended for the Publishing Office to be sent to* "THE PUBLISHER," *at the same address.*

Contributors are requested to send stamps for the return of the MSS. *in event of non-acceptance. Every care will be taken to ensure the safety of* MSS., *but the* EDITOR *and* PUBLISHERS *cannot hold themselves responsible for accidental loss.*

Correspondents are requested to write on one side of the paper only. The EDITOR *disclaims responsibility for the opinions expressed by Correspondents.*

LETTERS TO THE EDITOR.

[Several letters are unavoidably held over till next week.]

THE INFLUENCE OF STUDY ON THE LOSS OF THE TEETH.

SIR,—The following extract from *La Semaine Française* for November may be interesting to your readers :—"It would be impossible to deny the vast influence which the condition of the teeth exercises upon the general health and many stomachic affections. Dyspepsia, for instance, which is so often supposed to spring from remote causes, is, in reality, most frequently one result of swallowing imperfectly masticated food. Reaumur's experiments have long since proved that food cannot be digested without it is properly broken up. He caused some sheep to swallow tubes full of grass, saturated with saliva, but not chewed. Two days afterwards, examination showed that this food had not undergone any digestive change. Spallanzani still more conclusively proved this by causing a sheep to swallow two tubes—the one full of masticated, and the other of whole grass. The chewed grass was digested; the other remained unchanged.

"The state of the teeth not only affects one's bodily health, but also influences character. In one of his tales, Voltaire makes Doctor Sidrac say that people with sluggish livers are capable of the greatest crimes. This is, perhaps, going a little too far, but it must be conceded that such a habit of body strongly predisposes to hypochondria. In like manner a bad condition of the teeth, by the prolonged sufferings it occasions, and which are aggravated by the most trivial causes, ends by rendering the disposition morose, irritable, and thenceforward inclined to see only the dark side of everything.

"But if it be true that character can be influenced by the state of the teeth, is it also true—and this is the point I wish to bring forward—that the teeth rapidly decay under the influence of overwork? Two English doctors, Messrs. Leitherwood and Harlan, believe they have noticed that the teeth of those who devote themselves entirely to study undergo rapid changes, and that a period of rest retards the evil. They then put the further question: Are these occurrences attributable to an over-excited brain, whose excessive stimulation makes it assimilate to itself those phosphatic elements which would otherwise go to nourish the teeth? Or is this decay of the teeth due rather to a low state of health produced by overwork? It is well known that certain diseases of the nervous system, such as locomotor ataxy and infantine convulsions, have a very pronounced effect upon the teeth. It has further been proved that phosphorus is the special stimulant of the cerebral organ.

"Comparing together numerous facts which have been culled from different isolated observations, Messrs. Leitherwood, and Harlan find themselves compelled to admit that if the brain be over-stimulated by work the excess of phosphorus which it then consumes can only be gained at the expense of those organs which require this substance for their development—as, for instance, the bones and the teeth. This question is not new. It has already been studied in France by Doctor Lucas-Championnière. That learned practitioner has at different times verified similar facts. He advises that the studies of children shall be carefully watched, and so regulated as to be increased or lessened in accordance with the condition of their teeth. He also counsels those young persons who go in for competitive examinations or a university career to exercise the greatest watchfulness over their teeth, if they wish to preserve them."—I am, yours, &c., A. B.

QUERIES AND ANSWERS.

GENERAL.

TEDIA.—Read Taylor's "Medical Jurisprudence."

I. B. O.—Not suitable for our purposes. Many thanks.

C. A. B.—Apply to Messrs. Churchill.

EXAMEN.—The question of "pain," so far as we can see, does not begin until you reach the higher vertebrate animals. You surely cannot credit a frog with the pains of a man, or a fish with the pain of a dog. Warm blood alone, as well as the superior brain-power, must make a considerable difference in the nervous constitution of the animal.

CARIB.—"Peyer's patches" in the intestine.

UBIQUE.—No; not at present. The idea is not new.

SIMPLEX.—The aorta is the great main artery, which arises from the left ventricle of the heart. It carries the pure blood which has just come from the lungs.

CECILIA. See reply to "Tedia," above.

J. ANDERSON.—In "Leisure Time Studies," by Dr. Andrew Wilson, published by Chatto & Windus, 214, Piccadilly.

TAYLOR B.—An independent firm. No connection with that you name.

EXERCISE.—Maclaren's "Physical Training" should suit you.

HYGIENE.—Dr. George Wilson's "Handbook of Hygiene," published by Churchill, should give you all the information you need. We intend soon to begin the publication of papers adapted for students preparing for the Science and Art Examinations in Hygiene. Parke's "Hygiene" should also be consulted by you.

E. J. COX.—The exact functions discharged by the mineral constituents of the animal body are very imperfectly known. We know that chloride of sodium is necessary for the solution of the *Globulin* group of albuminous substances; *e.g.*, without this salt the contractile part of muscle would become solidified. The phosphate of sodium of the blood is a carrier of carbonic acid from the body or tissues to the lungs. Hydrochloric acid assists to digest proteids. Minerals are as essential as living matter—*why* they are so is only matter of speculation at present. They are never sources of *chemical energy*, this arising only from the oxidation (or other action) of organic substances. (See Gamgee's "Physiological Chemistry of the Animal Body." Macmillan.)

F. HUTLEY.—Cases for binding Vol. I. may be obtained from the publishers. Any bookbinder will place your numbers in one of our cases.

SANITARY.

J. BELL.—The "Pail" system is in operation at Glasgow, Nottingham, Leeds, Birmingham, Halifax (Goux system), Edinburgh (for ashes and house refuse), Manchester, Salford, &c. In Halifax the Goux System gives great satisfaction, the pails being lined with an absorbent medium, together with sulphate of iron or lime.

C. OTLEY.—1. The Moser "Dry Closet" is highly spoken of by Drs. Carpenter, Corfield, and others. Any kind of material may be used—ashes, dry earth, road-dust, sawdust, &c. 2. The *fosse mobile* is a tub, closed and placed on wheels, connected by pipes with the house-closets.

ALARMED.—No evidence to show that the milk of cows fed on sewage is in any way injurious. All the testimony points the other way.

B. AUSTIN.—The adult gives off about 160 grains *carbon* per hour. Of *carbonic acid* one adult exhales about 16 cubic feet per twenty-four hours, or about ·6 cubic feet per hour.

MARINE.—The Canal Boats Act is dated 1877.

ELGAR.—Male births exceed female births in all countries, but in England and Wales the proportion of boys to girls is less than in any other country in Europe. The average male births to 100 female births are for France 106·4, Italy 107·1, Scotland 105·7, Ireland 105·6, England 103·9.

THOMAS JACKSON & SON.—Apply to the Secretary of the Society, 44, Berners-street, Oxford-street, London, W., for all details.

E. F. BENNETT.—The best plan would be by means of a gas-stove. There are several "patents" which we think would suit you. Such a paper as the *Builder* contains advertisements of several, but a visit to a large ironmongery warehouse should result in your getting what you want. We know of two cases in which a gas-stove warms a lobby perfectly without smell.

W. H. HAMILTON.—Let us know the locality you think of as suitable, and we will do our best to give you the information you require.

MEDICAL.

D. MACKAY.—Let your friends have nothing to do with the Dispensary named. There are no qualified persons, so far as we can learn, connected with the place, which is a huge quack emporium; and there is a suspicious absence of names altogether, which

renders the manner of doing business that of the quack. Your friends should consult a qualified physician, and not spend their money on quackery. Kindly send us the other pamphlet, please. These "works of art" will come in handy one day.

JOCHIM.—Take a teaspoonful of Fellows' "Syrup of the Hypophosphites" in a wine-glassful of water thrice daily before meals. For the acne, try a wash (consisting of sulphate of zinc 20 grains; compound tincture of lavender 2 drachms; and water up to half a pint), after you have squeezed out the spots. A little smooth pumice-stone might be used to the face occasionally, and if this irritates, apply a little glycerine of starch. Don't tamper with arsenic.

URBICARIA.—Extreme care in diet is needful; a purge is indicate —"Æsculap" water is best—and Mindererus spirit may be taken (two teaspoonful doses in water every four hours) where the prostration is great. One particular article of diet may be the cause of the attacks. For allaying the itching, a lotion composed of one teaspoonful carbonate of soda to the pint of water will be found useful. This should be applied with a sponge several times a day. Slices of lemon rubbed on the parts also afford relief.

COLD BATH.—We do not think the cold has anything to do with your morning dip. Is your circulation good? We should advise you to look to your boots, and to ensure there is no obstruction to the circulation.

ANOTHER ANXIOUS INQUIRER was replied to in HEALTH, No. 31. If you will read the "Notices to Correspondents," you will see you cannot have your queries answered in the same week in which they are received.

D. E. POTTS.—Your case is simply one for care of your general health. Sleep on a hard mattress, use cold sponging each morning; take the tonic you name occasionally, and above all be cheerful. You do not say what you specially complain of beyond general weakness; but this latter should leave you in time. If not improved, write again, when we will recommend you a trustworthy physician.

MARIA KEMPTON.—Read our article on "Hay Fever," HEALTH, No. 16. Creosote might be used, and we would recommend you to try 10 drops to a pint of hot water, the steam being inhaled. A camphor inhalation might also prove useful. Ten drops of spirits of camphor, and 20 drops of rectified spirit are, in that case, to be added to the pint of hot water.

S. MARJORIBANKS.—Try applying a few drops tincture of steel daily to the wart. If this does not suffice, touch it with *glacial acetic acid* (be careful the acid does not touch the surrounding skin)—the common acetic acid is of no service. "Aromatic vinegar," carefully applied, will sometimes also remove warts.

H. WILSON H.—No need to be alarmed. Take the tonic recommended to "Jochim," above, and apply pure Vaseline for the itching. If not better, write again. No need for any "belt."

G. G.—The pain is probably due to digestive disturbance and flatulence. Attend carefully to your eating. Avoid vegetables for a time, and let your food be thoroughly light—soups, beef essence (Brand's), and such like. This alone may cure you. If the pain is very intense, we should recommend the insertion of a suppository containing ¼ grain of morphia. This will relieve you.

LONGFIELD.—1. Try "Friedrichshall" or "Æsculap" water as a mild aperient; let your diet, for a time, be as completely vegetable in nature as you can obtain; and if not improved under this dietetic treatment, write again. 2. No accounting for the irregular moustache-growth. Try the effect of trimming the weaker side frequently.

C. Y. R. O.—1. Take the tonic recommended to "Jochim" above. 2. For the irritation use a little plain Vaseline. 3. Try cold sponging to the parts each morning. 4. Look to your general health. Write again if not improved. No need for alarm, so far as we can see.

W. F. LONGMUIR.—A quack production. Have nothing to do with it. Read our papers on "How to Get Thin or Fat." The "cure" is a costly one, evidently, and although you are told what it is (or pretends to be), you cannot have it save through the proprietor. This is "an old stage trick." Save your money if you are wise.

UNFORTUNATE.—Don't waste your money on a man who drives a bargain for £10 with you for a cure. That is the essence of quackery. See advice to "D. E. Potts" above, and take the tonic recommended to "Jochim" in present number of HEALTH. You are not in ill-health, and with care will become quite well.

K. O. E.—1. No; don't use dumb-bells. They will likely increase the feeling, which is purely nervous, and will only leave you when your health is thoroughly established. Send us details of health, habits, &c. 2. A symptom of indigestion. Try the effect of rest after food, and a little "Pepsine" with your meals.

RECRUIT.—We think you should attend firstly to the state of your digestive system. A little "Æsculap" or "Friedrichshall" water occasionally in the morning should do you good. For the pains, try hot salt baths, and let your food be very light and nourishing for a time—soups, milk, fish, &c., but no vegetables. Yours is a case not for drugs, but for regulation of diet.

A NERVOUS ONE.—Your case seems to be one either of constitutional nervousness or of nervousness depending on ill-health. If the first, more frequent public appearances should modify your sensations. As to the second, we can form no opinion, as you do not give any details. You might meanwhile try the tonic recommended to "Jochim" above as a nervine stimulant.

A. BUTLER.—The inhalation treatment should do you good. Try ten drops tincture of iodine (or of creosote) to the pint of hot water, and inhale the steam arising therefrom. The following will also do you good:—Carbonate of ammonia, half a drachm; spirit of chloroform, one and a half drachms; infusion of senega to make up eight ounces. Two tablespoonfuls every four hours.

A. S. H. W.—Try the tonic recommended to "Jochim" above, and let us hear how you are in a fortnight's time.

GRATEFUL.—1. Avoid chills and heated rooms. Try cold sponging in the morning, if you have sufficient reaction. 2. Learn to open the eyes under water, as you plunge your face into a basin of cold water. Bathe them also at night with a lotion of alum, made by dissolving three grains of alum in an ounce of distilled water.

PODAGRA.—Try soap plaster, spread on kid or wash-leather, for a time. Painting with tincture of iodine should also do good. Messrs. Dowie and Marshall should certainly be consulted. They have had a large experience in such cases as yours.

A. E. J.—The hair-trouble is a result of the weak health. Use Rowlands' "Macassar Oil" night and morning (well rubbed in), as an application. But you must look to your general health. You wash your head much too frequently.

WINTER.—See to your boots, that they do not constrict your ankles, and thus affect the circulation in your feet. Wash the feet night and morning in water in which bicarbonate of soda has been dissolved. Attend specially to your socks, and wear light ones for a time.

AUNTIE.—In all probability the child has a weakly constitution. We should strongly advise you to begin at once to give her cod-liver oil, with the syrup of iodide of iron added. This is indicated by the symptoms. Removal to the sea-side might also do good; but the cod-liver oil and iron are necessities. No local treatment will be of any avail without them. Use Condy's "Fluid" and water for cleanliness' sake.

HERBERT.—Take the tonic recommended to "Jochim" in present number of HEALTH, and don't be alarmed about yourself. The secretion is not what you suppose it to be. Continue the cold sponging daily, along with the tonic, and have no fear for the future. Write again, if not relieved.

QUÆRE.—We cannot advise you to consult the person you name, because we know nothing of his treatment, and because we do not regard electricity as at all adapted for your case. We should recommend you to wear a suspensory bandage; to use cold sponging in the morning. You need not fear "atrophy"; but if the veins cause any severe annoyance, a simple surgical operation will be necessary.

DIM SIGHT.—1. Use camphorated chalk. We do not know the powder you name. "Quinine Tooth Powder," properly made, is good. 2. Rowlands' "Macassar Oil" is a safe oil, and, used along with a moderately hard brush, will prevent dandriff. You should not allow your hair to become dry, but use a little oil each morning. 3. Exercise is the safest remedy—walking (with due attention to nourishment) should aid you in your endeavour to strengthen your legs.

MUSICAL.—Your question is a difficult one to decide, because much depends on individual temperament, amount of excretion by lungs, skin, and kidneys, &c. The man would undoubtedly be heavier after supper, because he has received so much new matter into his stomach. Next morning he would not be so heavy—all night long his heart and lungs, for example, have been at work, and this work is always accompanied by waste; while the skin, lungs, and kidneys have been getting rid of waste products. The probability is, that whatever he ate at night, he would be of his normal or ordinary weight in the morning.

M. P.—1. Use injections of Condy's "Fluid" (1 to 10 of water) for the nose. Give cod-liver oil, thrice daily, with syrup of the iodide of iron added (see also advice to "Felix"); and try the effect of a change to the seaside. The throat might also be gargled with a lotion made of biborate of soda, 1 drachm; and glycerine, 2 oz. The nose trouble is constitutional, and will not be cured without the cod oil and iron. 2. Depends on some peculiarity of constitution. Try the effect of fifteen drops *Fer Bravais* (or Wyeth's "Dialysed Iron") thrice daily for a week or so, and let us hear the result. Stop the quinine and iron.

KATINKA.—You should have an elastic stocking accurately fitted

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to your ankle by a surgical instrument maker. This will give the needful support for a time until it is strengthened.

W. S. Humphrey.—We pity you, because you are thoroughly nervous over what need not trouble you at all. You are, by your own account, perfectly healthy, and yet you worry yourself over shadows. You need no medicine save perhaps a tonic, such as that recommended to "Jochim," in present number of Health. Use cold sponging each morning, and be cheerful. Don't brood over your fancied ailments, above all.

J. P.—The secretion you name is *not* what you suppose it to be, so keep your mind quite easy. See and follow advice to "Jochim" above. You should not get low-spirited, for with the tonic above-named and cold sponging in the morning, you will get quite well. Write again if not cured.

Felix.—You suffer from a constitutional ailment, for which we should advise you to begin at once a course of cod-liver oil and syrup of iodide of iron. Have 3 drachms of the syrup of iodide of iron added to six ounces of cod-liver oil, and a little mucilage acaciæ—making up a six-ounce mixture in all, and take a tablespoonful of this thrice daily. Clothe warmly, avoid chills, and let your diet be generous.

Youthful Folly.—Take the tonic recommended to "Jochim" above; and if not cured, write again. Such a tonic will remedy the lowness of the system on which your affection depends.

Tom Pinch.—Don't feel alarmed. What you name, as often as not, is a sign of health. Take cold baths, or try cold sponging, each morning; let your food be non-stimulating; sleep on a hard mattress, and don't take fluids late at night. Write again if you don't improve.

Caroline Johnson.—You have probably strained some of the ligaments of the knee. We should advise you to have an elastic knee-cap fitted by a surgical-instrument maker, and to use hot and cold water douches to the knee alternately, twice or thrice a day.

A. S. T.—1. There is a person of the name you mention on the "Medical Register;" but we do not know whether the qualified man is the person named or his son. 2. We have not seen the "magnetic" appliances you name; but in our experience it is safer to assume that so-called "magnetic" appliances are shams, than to believe that they possess electrical properties. There are hundreds of shams for one genuine article of the kind. Read the articles on electrical appliances (by Mr. Carpenter), recently published in Health. 3. See advice to "Tom Pineh," in present number of Health.

S. W. P.—Such belts as we have seen of the kind you name are worthless in so far as electrical effects are concerned. Read Mr. Carpenter's recent articles in Health on "Electrical Appliances." Have nothing to do with any of these "belts." Pulvermacher's Belts are genuine electrical appliances, in that they can be proved to produce strong currents. The ordinary "belts," magnetic and otherwise, produce no current at all.

A. B. C.—1. You should not take tea or coffee with dinner. "Meat-teas" are decidedly injurious to digestion. Cocoa might be taken, but it is better to avoid taking either tea, coffee, or cocoa with the chief meal of the day. 2. There is no more common cause of so-called heart-troubles than indigestion. There is strong sympathy betwixt heart and stomach. See to your digestion. 3. See any physiology text-book for the reply to your third query, which is much too lengthy a matter for reply here. Dr. G. Wilson's "Healthy Dwellings," or Corfield's "Health," or any of the Health primers will suit you. We begin our "Food" articles very shortly.

Ivanhoe.—We are keeping the "bath" papers in mind; but space is limited, and we must give attention to many other details. As to the heat of smoking-room, the room should be even cooler than, say, a dining-room, on account of the smoke and tendency to impure air. Hang the thermometer about the middle of the wall. You want the average temperature—not that of the cool below, or the heated air above. 3. Depends very much on individual power, amount of work (physical and intellectual), health, &c. You must judge by results, and see that no symptoms of lassitude follow. If absent, the practice will be safe.

Investigator will please note that all queries are to be addressed to the Editor, and not to the Publishers of Health. "Bright's Disease" is a serious kidney disorder. Its causes are very varied—cold, intemperance, scarlet-fever, &c., and certain constitutional states.

Jack o' Lantern.—You suffer from acne. The "maggots" consist merely of matter which blocks up certain of the skin ducts. See advice given for this ailment to "Jochim," in present No. of Health.

Hope for the Best.—1. No wonder: celery and tea will not assimilate. Eat your celery after dinner, and don't take tea-dinners at all. 2. Try inhaling occasionally the steam arising from a pint of hot water, to which 10 drops of creosote or tincture of iodine have been added. This will cure the phlegm. Try the effect for a

week or so of the tonic recommended to "Jochim" in the present number of HEALTH. The hearing may possibly be bettered by a general toning of the system. See that your abstinence is not carried too far. We never recommend alcohol to be taken where it can be of no service; but a glass of good claret with dinner often saves much medicine-drinking, and, so used, *is* a medicine and dietetic.

C. F. J.—1. Wear a flannel bandage from the loins; see to the warmth of the feet; avoid dampness from perspiration, or any other cause, and see to the general health. 2. Describe the symptoms of the person who rejects the food. In such a case there is reason to suspect stomach-disorder of one kind or another.

H. ROSE.—Yes; if what you name occur too frequently they may affect the health. You do not say how frequently the ailment occurs. Try cold sponging each morning, sleeping on a hard mattress, and avoid taking fluids late at night. Don't be alarmed in the least, and let us know in a little if you have improved.

BELLA.—The acetic acid in our opinion would injure the hair. Read our papers on the "Hair," which you will find in the early monthly parts of HEALTH. Various recipes are there given for strengthening the hair.

GILBERT.—Avoid stimulants. See advice to "H. Rose" above. You suffer from no disease, so don't be alarmed, and avoid quacks above all.

A TAILOR.—Possibly your trade may affect your knee. We should advise you to try the effects of hot salt bathing to the leg, applied frequently at night, and avoidance of cold. When the pains are severe, rub the leg with hot oil. Clothe warmly and avoid chill. In your case you may derive good from a tablespoonful of cod-liver oil, taken after food thrice daily.

BETA.—In such a case, we should feel inclined to suggest your having a good surgical opinion. These cases often depend on some local condition which only a surgeon can, by personal examination, counteract. We should say, from your description, that the patient demands some constitutional treatment (*e.g.*, cod-liver oil and iron), and strict attention to the general health is absolutely necessary. Glad to advise further, if need be; but you should see a good surgeon.

TYPO.—Substitute for the iron, the tonic recommended to "Jochim" in present number of HEALTH. Take this for a week or so, and report again. Let your diet be light, but generous and nutritious. Avoid chills, especially after exercise.

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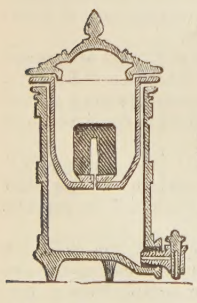

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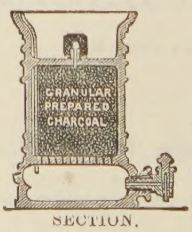

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